REMARKS

Claims 1, 3-8 and 10-13 are all the claims pending in the application.

Claims 1, 3-8 and 10-13 are rejected.

Claims 1, 3, 7, 12, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wan et al. ("A New Approach to Image Retrieval with Hierarchical Color Clustering," *IEEE Trans. on Circuits and Systems for Video Technology,* Vol. 8, No. 5, Sep. 1998, pp. 628-643), in view of Kothuri et al. (U.S. 6,381,605).

Claims 4-6, 8, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wan et al. ("A New Approach to Image Retrieval with Hierarchical Color Clustering, " *IEEE Trans. on Circuits and Systems for Video Technology* Vol. 8, No. 5, Sep. 1998, pp. 628-643), and Kothuri et al. (U.S. 6,381,605) as applied to claims 1, 3, 7, 12, 13 above, and further in view of Weber et al. ("A Quantitative Analysis and Performance Study for Similarity-Search Methods in High-Dimensional Spaces," *Proceedings of the 24th International Conference on Very Large Data Base,* New York, August 1998, pp. 194-205).

The Applicants traverse the rejections and request reconsideration.

Claim rejections under 35 U.S.C. § 103

Rejection of claims 1, 3, 7, 12, 13 based on Wan et al. in view of Kothuri et al.

Wan allegedly teaches clustering based on a uniform quantization. Claim 1 requires the cells to be uniform. Further, claim 1 requires determining whether one or more cells **from said plurality of cells**, on each of which one or more of said plurality of feature vectors are correspondingly concentrated, exist.

On the other hand Kothuri does not teach uniform cells. Kothuri suggests dividing the data into subsets such that each data will fit into a leaf node. On the other hand, in the present invention, as recited in claim 1 as well as in Wan (as alleged by the Examiner) the cells are divided into a plurality of cells having a uniform size regardless of whether they will fit into a particular cell or sub-cell.

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. MPEP 2143.01 *citing In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). Further, if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *Id. citing In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

To combine the teachings of Wan and Kothuri, considerable modification would be required to the respective teachings of Wan and Kothuri. If Wan is modified to have the non-uniform cells as in Kothuri, it will be unsatisfactory for its intended purpose. In fact, the last paragraph of page 631 clearly discusses why Wan prefers uniform sizes. Likewise, Kothuri can not be modified to have uniform cell sizes because the rest of the steps in Kothuri are based on the assumption that the division is determined based on a median computation. Kothuri determines if the data items fit into one node. If they do not fit, the variance in each dimension is determined. Then a dimension or attribute hierarchy having a greatest variance is selected and

the data items sorted in that dimension. The data is divided into subsets such that each data will fit into a leaf node. If the cells are uniform, then this technique is not believed to produce its intended result.

Even if the references are combined, they do not suggest determining whether one or more cells from said plurality of (uniform-sized) cells as required by the present invention.

Kothuri suggests dividing into a number of clusters, each of which contains a number of data items that will fit into one leaf node. Checking to see if there are uniform-sized cells where feature vectors are concentrated and hierarchically partitioning them, as in the present invention, is different from dividing the data set into non-uniform subsets such that each data will fit into a leaf node.

A skilled artisan would not have found it obvious to practice the invention recited in claim 1 from the combined teachings of Wan and Kothuri.

Claim 3 is dependent on claim 1 and is allowable for the same reasons.

Claims 7, and 12 include limitations analogous to claim 1 and are allowable at least for analogous reasons.

Claim 13 is dependent on claim 12 and is allowable for the same reasons.

Rejection of claims 4, 6, 8, 10 and 11 based on Wan et al. in view of Kothuri et al. and Weber

Claims 4 and 6 are dependent on claim 1 and are allowable for the same reasons.

Claims 8, 10 and 11 are dependent on claim 7 and are allowable for the same reasons.

Moreover, Weber does not overcome the deficiency noted in the combined teachings of Wan and Kothuri.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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